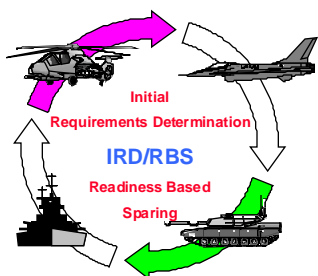**F
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Materiel Management
Initial Requirements Detemination/ Readiness Based Sparing (IRD/RBS)

Developed under the direction of the Joint Logistics Systems Center, the Initial Requirements Determination/Readiness Based Sparing System (IRD/RBS) provides the customer a standard suite of computational techniques for initial provisioning requirements based on either readiness based objectives or supply performance objectives. IRD/RBS will satisfy the above requirement while moving to a client/server environment, with the overall objective of minimizing the initial buys of spare and repair parts. Attaining this objective will result in increased weapon system availability at a reduced cost and increased data standardization in the DoD.

FUNCTIONS

The major functions of IRD/RBS are:

- SESAME module - Provides a readiness based retail computation for land based equipment
- PCARROWS module - Provides a readiness based retail computation for aviation based equipment
- Navy RBS module - Provides a readiness based retail and wholesale computation for surface ship equipment
- CARES/SPA module - Provides parameters to requirement computations and is used in IRD/RBS to evaluate alternative sparing solutions in multi-echelon calculations
- Multi-echelon module - Utilizes wholesale and retail models to determine optimum secondary item wholesale and retail performance parameters for a corresponding weapon system availability
- Supply-oriented computation module - Computes initial requirements based on supply performance objectives

CONTRIBUTING SYSTEMS

IRD/RBS represents an integrated capability derived from multiple migration systems from across the DoD. Specifically, those systems which have contributed to IRD/RBS are:

**Initial
Requirements Determination**

IRD/RBS

**Readiness Based
Sparing**

- Selected Essential Item Stockage for Availability Method (SESAME) - Army
- Personal Computer Aviation Readiness Requirements Oriented to Weapon Replaceable Assemblies (PCARROWS) - Navy
- Navy Readiness Based Sparing (RBS) Workstation includes Computation and Research Evaluation System (CARES) and Availability Centered Inventory Model (ACIM) - Navy
- Computation and Research Evaluation System/Supply Performance Analyzer (CARES/SPA) - Currently being developed by the Navy

TECHNICAL DATA/SYSTEM ARCHITECTURE

IRD/RBS will operate in a two-tiered architecture. It provides databases on the mid-tier and processing capabilities through client-server networks to the workstation tier. This distributes data and processing to the levels which provide for optimal performance.

BENEFITS

The Initial Requirements Determination/Readiness Based Sparing System will provide significant benefits to DoD components to include the following:

- Optimized initial order quantities of spare and repair parts to increase initial weapon system availability
- An integrated system to support DoD initial requirement computations and related business processes
- Data stored using a Relational Database Management System (RDBMS) as part of a single, logical database hosted in a client-server architecture
- Interoperability through use of standard data elements and data transfer mechanisms
- Menu-driven user interface and logical navigation of IRD/RBS software functions and Government Furnished Model Programs
- Other features such as on-line editing of parameters and data, report generation on an "as required" basis, and on-line help

SUMMARY

This system represents a joint development effort involving functional user representatives from DoD as well as system professionals from the development contractor. The IRD/RBS is based on advanced automation concepts and technologies, designed with user participation to ensure the final product meets the customer needs. This system and software documentation are available upon customer request.